REMARKS

Claims 48-86 and 88-89 are currently pending in this application. Claims 1-47 were previously canceled and claims 64-67 and 79-85 were withdrawn. After the entry of this Amendment, claims 48-63, 68-78 and 86-89 remain. Claims 48, 57, 59, 68 and 86 have been amended and claim 87 has been canceled.

The Examiner objected to claims 57 and 68 for various formalities. Applicants have amended claims 57 and 68 to correct the errors. In light of the foregoing, Applicants respectfully request the withdrawal of the claim objections.

The Examiner rejected claims 48-59, 61-62 68-70 and 86-89 under 35 U.S.C. §102(e) as being anticipated by Zhang (U.S. Publication No. 2004/0088456).

Zhang discloses a smart hard-disk drive (sHDD); data can be downloaded or uploaded from the sHDD (paragraph 0019); the sHDD can support at least USB host function; the sHDD motherboard 86 in Fig. 4A comprises HDD block 66a and interface block 66b (paragraph 0060); the HDD- based camcorder shown in Fig. 12a comprise the HDD 8 which can be sHDD (paragraph 0088) and interfaces with the camcorder with an USB (or IEEE 1394, other interface protocols are also acceptable) connector 7m; the HDD-based camcorder (Fig. 12c) comprises an MPEG encoder 128me which converts the raw video data to MPEG-format before sending it to the HDD in the USB format.

Independent claims 48, 59 and 86 are further amended, and claim 87 is cancelled and is incorporated into claim 86. Applicants contend that the amended claims 48, 59 and 86 are not anticipated by or obvious in view of the cited references for the following reasons.

Zhang fails to disclose a detecting unit, an interface protocol identification unit and a conversion unit of claim 1, especially the following underlined features:

a detecting unit, configured to detect USB packets received by the transceiving unit, so as to determine whether the received USB packets carries data which accords with a particular specification and is available for the external service module (paragraph 0042);

an interface protocol identification unit, configured to identify an interface protocol of the external service module (Fig. 20); and

a conversion unit, configured to convert the received USB packets to obtain the data which accords with the particular specification (paragraph 0042) when determining that the received USB packets carries the data which accords with the particular specification, and to convert transmission data from the external service module which accords with the particular specification into data which accords with the USB specification for transmission via the

transceiving unit, based on the identified interface protocol of the external service module (paragraphs 0092-0093, 0097).

According to the interface of new claim 1, when receiving data from the a digital signal processing host device, the received USB packets are converted to obtain data which can be received and processed by the external service module. The interface of claim 1 is suitable for various service modules and conversion between data of various protocols and USB data, not being limited to conversion of MPEG data to USB data. But Zhang only recites "MPEG encoder 128me converts raw video data to MPEG-format before sending it to the HDD in the USB format" [paragraph 0088], and "USB controller 138uc converts USB data into MPEG data" [paragraph 0090]. Further, Zhang fails to disclose the detecting unit and converting unit, thus the HDD of Zhang cannot convert data of various protocols or formats and is only suitable for converting MPEG data, or asynchronous data of PES format in MPEG protocol.

According to the interface of new claim 1, before transmitting data from the external service module to the digital signal processing host device, an interface protocol of the external service module is identified, transmission data is converted into USB data based on the identified interface protocol. Thus the interface of the present invention can transmit data or data streams of various protocols or formats, for example, parallel synchronous data, parallel asynchronous data, serial synchronous data and serial asynchronous data.

The present invention provides a universal bi-directional data transport interface (UTI) based on the USB specification, which has good universality and extensibility and can be applied to connect devices or modules for various types of services (paragraph [0038]).

Zhang fails to teach or suggest the above features of claim 1 and cannot achieve the above technical effects. Thus the new claim 48 is not anticipated by Zhang or obvious in view of Zhang.

Claims 59 and 86 are amended to include features which are the similar to those recited in claim 48 or correspond to features of claim 48.

In light of the foregoing, Zhang does not teach or suggest each and every limitation of claims 49, 58, and 86. As such, claims 49, 58, and 86 are allowable over Zhang. Claims 49-58, 60-85 and 88-89 depend from claims 49, 58, and 86 respectively and are also allowable over Zhang for these and other reasons.

The Examiner rejected claims 60 and 63 under 35 U.S.C. §103(a) as being unpatentable over Zhang in view of Robertson (U.S. Publication No. 2001/0047441).

Claims 60 and 63 depend from claim 59 and add additional limitations. As discussed, Zhang does not teach or suggest each and every limitation of claim 59, much less those of claims 60 and 63.

Robertson does not cure the deficiencies of Zhang. Robertson is cited for a teaching relating to an RF processing unit configured to transmit the control commands. However, Robertson does not teach or suggest, nor does the Examiner allege that Robertson teaches or suggests anything regarding a detecting unit, an interface protocol identification unit, or a method for transmission between the digital signal processing host device and the external service module as recited in the independent claims.

In light of the foregoing, Zhang and Robertson, alone or in combination do not teach or suggest each and every limitation of claim 58. As such, claim 58 is allowable over Zhang and Robertson. Claims 60 and 63 depend from claim 58 and are also allowable over Zhang and Robertson for these and other reasons.

The Examiner rejected claims 71-76 under 35 U.S.C. §103(a) as being unpatentable over Zhang in view of Eskicioglu (U.S. Patent No. 7,254,236).

Claims 71-76 depend from claim 59 and add additional limitations. As discussed, Zhang does not teach or suggest each and every limitation of claim 59, much less those of claims 71-76.

Eskicioglu does not cure the deficiencies of Zhang. Eskicioglu is cited for a teaching relating to an acquisition unit. However, Eskicioglu does not teach or suggest, nor does the Examiner allege that Eskicioglu teaches or suggests anything regarding a detecting unit, an interface protocol identification unit, or method for transmission between the digital signal processing host device and the external service module as recited in the independent claims.

In light of the foregoing, Zhang and Eskicioglu, alone or in combination do not teach or suggest each and every limitation of claim 58. As such, claim 58 is allowable over Zhang and Eskicioglu. Claims 71-76 depend from claim 58 and are also allowable over Zhang and Eskicioglu for these and other reasons.

CONCLUSION

In light of the foregoing, Applicants respectfully submit that the application is in a condition for allowance.

Applicants' undersigned attorney is available to discuss the application in a telephone conference during normal business hours if the Examiner believes it would expedite the prosecution of the application.

Respectfully submitted,

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